

ABSTRACT

Multi-functional electro-acoustic apparatus has a bending wave panel loudspeaker, an input device (11) forming part of the surface of the bending wave panel (5), and means (13) for providing force feedback to the input device. An electro-acoustic transducer (15) attached to the bending wave panel excites bending waves in the panel to produce an acoustic output. The panel (5) provides several functions and may be considered to be a hyper-functional surface (HFS).